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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION  
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In the Matter of

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Revision of the Commission's Rules  
to Ensure Compatibility with Enhanced  
911 Emergency Calling Systems

CC Docket 94-102 /

SUPPLEMENT TO FURTHER COMMENTS  
OF NENA, APCO AND NASNA

In Further Comments dated July 24, 2001 on the AT&T Wireless Request for Waiver filed April 4, 2001, the National Emergency Number Association ("NENA"), the Association of Public-Safety Communications Officials-International, Inc. ("APCO") and the National Association of State Nine One One Administrators ("NASNA") promised additional information as follows:

[T]he carrier which heretofore has refused to disclose its participation in the SigmaOne trial recently was ordered by the Commission to make that disclosure. Once the material is available, we should be able to make the connection.

(Further Comments, 11, n.7) Exhibit D to the waiver request of Cingular Wireless now is available to the public, and casts further light on the third-party network solutions which have been shown superior to the MNLS proposal in the AT&T waiver request.

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Cingular's trials of the SigmaOne location technology <sup>1</sup> in San Antonio eight to 12 months ago are discussed at page 16-18 of Exhibit D.<sup>2</sup> The exhibit only covers urban and rural trials. For whatever reason, a suburban audited trial whose outcomes were reported by SigmaOne<sup>3</sup> has not been included in Cingular's Exhibit D. The test took place in March 2000, presumably under the auspices of SBC Wireless, one of the companies whose joint venture was approved in September, 2000. SigmaOne's report of the audited results listed 95 and 85 meters as the 67% accuracy for AMPS and TDMA, respectively, while the 95% accuracy was 200 meters and 175 meters.

Cingular reports the urban trial at 96 meters (67%) and 132 meters (95%). The rural outcomes, according to Cingular, ranged from 235 to 254 meters (67%) and 505 meters to 695 meters (95%). Cingular then averaged the urban and rural "Erroneous Accuracy" results to produce a composite figure of 166 meters (67%) and 319 meters (95%). This appears to have been an unweighted rather than weighted averaging. Given the disparity between the 96-meter (urban) and 235-meter (rural) outcomes for the 67% measurement, it is fair to ask for the relative numbers of urban and rural calls placed. Neither the Cingular nor the SigmaOne report of the trials gives

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1. In our Further Comments at 4-7, we discussed AT&T trials of U.S. Wireless and Grayson which produced better results than MNLS in several environments. We also reviewed what SigmaOne had disclosed of its San Antonio tests in exhibits to SigmaOne's communication of June 5, 2001.
  2. Exhibit D is a summary prepared by a Cingular employee. We are advised that detailed written reports on the trials exist. The Commission should request these and disclose them, not only for relevance to the AT&T waiver request, but also for Cingular's own request, the TDMA/MNLS portion of which has been withdrawn for further work.
  3. June 5, 2001, Exhibit B, 13, 15.

numbers of urban and rural calls, but the latter suggests an assumed call breakdown of 75% suburban, 15% urban and 10% rural.<sup>4</sup>

If it is true that urban calls outnumber rural by 3 to 2 (when only these two types are compared) and the results reported by Cingular are so weighted, the 166-meter average (67%) drops to 152 meters. SigmaOne's own calculation of the composite results for suburban, urban and rural calls was 110 meters (67%) and 236 meters (95%).<sup>5</sup> The first of these numbers represents, arguably, a minimal variance from the FCC requirement of 100 meters/67%, while the second falls comfortably under the 300-meter 95% standard.

These outcomes are more complicated than depicted here, and “apples-to-apples” comparisons between MNLS and third-party solutions are not yet available. Verizon has proposed installing the Grayson solution in three markets, but even this will not represent a head-to-head trial against Verizon’s counterpart to MNLS, a Lucent solution called EFLT.<sup>6</sup>

As the Commission is aware, NENA has entered into an agreement with RCC Consultants to conduct “field testing and certification” of wireless E9-1-1 location solutions. A press release announcing the NENA-RCC strategic alliance is attached. While the original intent of the program was to test and certify the accuracy and reliability of location systems after their installation and start of operation – at the request of carriers, vendors or 9-1-1 authorities – NENA and RCC have

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4. June 5, 2001, Exhibit B, 14, n. 3.

5. This is the result reported for TDMA, which is directly relevant to the evaluation of MNLS performance. The SigmaOne AMPS results were similar, but MNLS does not work with AMPS.

6. Verizon’s current air interface is CDMA, AT&T’s is TDMA, which presumably creates additional variables.

determined that the program could be applied to waiver situations as well. This might occur prior to a decision on the waiver request, or as a condition upon any approval of the waiver.

Assuming prior consultation and agreement with interested parties, field testing and certification could be employed in connection with the AT&T waiver request or any other pending application. Because NENA has received questions about the program from carriers, manufacturers and vendors, this Supplement offered a convenient vehicle to expand on the description in the attached release.

### CONCLUSION

For the reasons discussed, NENA, APCO and NASNA continue to believe that AT&T has not made its case for waiver of the wireless E9-1-1 Phase II location rules.

Respectfully submitted,

NENA, APCO and NASNA

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National Emergency  
Number Association



## **9-1-1 Association Announces Program to Field Test Accuracy of Wireless 9-1-1 Location Services**

### ***NENA to Certify 9-1-1 Location Information for Cellular and Wireless 9-1-1 Callers***

Columbus, Ohio (May 7, 2001)—The National Emergency Number Association (NENA) today announced its new field testing and certification program for Wireless 9-1-1 applications. The first element of the program will verify that wireless 9-1-1 callers will be located within the accuracy requirements mandated by the Federal Communications Commission (FCC) and that their calls for emergency services will be correctly routed to the appropriate public safety answering point (PSAP).

When a wireless telephone user makes a 9-1-1 call, it is vital that the caller's location is known and that the call is routed to the PSAP best able to send the required assistance in the shortest amount of time. Lack of accurate location information or the incorrect routing of wireless 9-1-1 calls could significantly delay the arrival of help and have dire consequences for the safety of life, limb, and property. Responding to increasing demands for better delivery of emergency services to wireless phone subscribers, the FCC mandated that wireless communications service providers implement the technology necessary to locate wireless 9-1-1 callers. The FCC has specified the timeframe in which this technology must be implemented and the degree of location accuracy that must be afforded.

Two classes of location technologies have been advanced for solution of this problem. One class of solutions requires modifications to wireless carriers' network facilities, and the other class of solutions requires the location determination functionality to be resident within the subscriber's handset. Regardless of the type of solution deployed, the wireless 9-1-1 call must be routed to the PSAP serving the area where the call initiated. NENA's testing and certification program will ascertain carrier compliance with FCC regulations, regardless of the location determination technology deployed and regardless of the underlying wireless communications technology.

In order to rapidly deploy the Program, NENA has formed a strategic alliance and agreement with RCC Consultants, Inc. (RCC), a nationally recognized communications consulting firm with particular and unique expertise in wireless network communications technology, public safety communications systems, and the development of related software applications and field testing techniques.

“NENA and RCC have designed this program to provide benefits to the three major constituents of Wireless E9-1-1”, said Mark Adams, NENA Executive Director. “First, certification provides comfort to the wireless network operators that the technology they selected meets Federal Communications Commission rules by accurately determining the location of the emergency caller. Second, the governmental entities that operate the 9-1-1 system and the PSAPs have an independent, unbiased test that proves that the location of a Wireless 9-1-1 emergency call is both accurately determined and that the call is routed to the proper PSAP. And third, the public—more than 65% of whom cite security as a reason for buying wireless devices and service—will be assured that the wireless operators and the PSAPs have made their best effort to ensure that emergency calls will be properly routed and that callers will receive help.”

“NENA and RCC have applied their unique and respective strengths to bring this vital public service to the marketplace,” said Michael W. Hunter, RCC President and Chief Executive Office. “We are committed to providing unbiased and technically sound tests and to collecting data that proves whether or not the public will be properly served by a given implementation of Wireless E9-1-1 location technology. We applaud NENA for their foresight in identifying the need to bridge the theory of location technology to proof that it works in the real world.”

Further information concerning the Certification Program will be provided at NENA’s 2001 Annual Conference, to be held June 24-28 in Orlando, Florida.

### **About NENA**

NENA is the only organization dedicated solely to the promotion and implementation of 9-1-1 as America’s universal emergency number. NENA’s mission is to foster the development and implementation of 9-1-1 as a universal emergency number. NENA has more than 7,000 members, most of whom manage over 6,000 9-1-1 centers that answer and process emergency calls. As an integral part of its mission, NENA also develops recommended standards and practices for 9-1-1 centers and manufacturers of 9-1-1 equipment. The NENA testing and certification program

announced today will support the Association's efforts to promote effective and reliable 9-1-1 services for all citizens in North America.

Visit NENA on the Internet at [www.NENA.org](http://www.NENA.org)

### **About RCC**

RCC Consultants, Inc. is a professional engineering and consulting firm that was incorporated in 1983 and is headquartered in Woodbridge, New Jersey. RCC's mission is to help clients achieve their operating objectives through the intelligent and efficient application of communications and information technology. RCC is an industry leader in public safety communications consulting wherein it provides a broad array of professional services, including: design and implementation of 9-1-1 emergency telephone systems and networks; emergency communications centers and Public Safety Answering Points (PSAPs); mobile voice and data radio systems; microwave and fiber optic networks; computer aided dispatch and records management systems; local and wide area voice and data networks; strategic consulting; systems operations and management; and grants funding assistance. RCC has successfully designed and implemented regional, statewide and nationwide voice and data communications networks for public safety and commercial clients.

RCC's engineers and software developers have designed tools and processes that will be used in the Wireless 9-1-1 Certification Program to test and validate location determination and call routing of emergency calls from wireless subscribers.

The firm's engineers and consultants are based in Arizona, California, Delaware, Florida, Illinois, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Montana, Nevada, New Jersey, New York, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, Texas, Virginia, Washington, and London, England (RCC Consultants Limited).

Visit RCC Consultants on the Internet at [www.RCC.com](http://www.RCC.com)

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